

ABSTRACT

The present invention aims to prevent the occurrence of liquid compression at the second rotary compression element before it happens while improving the compression efficiency with an intermediate cooling circuit in a refrigerant cycle apparatus which comprises an internal high-pressure type multi-stage compression compressor, and the invention is summarized in that the apparatus comprises an intermediate cooling circuit which allows refrigerant discharged from the first rotary compression element of a compressor to dissipate heat, where a microcomputer performs control on the number of revolutions of the compressor to maintain the temperature/pressure of refrigerant so that the refrigerant does not condense at the output of the intermediate cooling circuit, where such a control is done in response to outputs from an outside-air temperature sensor, a refrigerant temperature sensor, and a signal from a controlling apparatus of a refrigerating apparatus body.